

ELECTRONIC TUBE REFERENCE

KF4

Voltage - Pentode High Frequency (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Low-current directly heated battery pentode for fixed-gain high-frequency amplification in economical portable receiver circuitry.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	2 V / 65 mA	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	1000000 Ω
TRANSCONDUCTANCE	0.0008 S
MAXIMUM PLATE VOLTAGE	135 V
MAXIMUM SCREEN VOLTAGE	135 V
MAXIMUM PLATE DISSIPATION	0.5 W
MAXIMUM SCREEN DISSIPATION	0.25 W
MAXIMUM CATHODE CURRENT	5 mA
Published target-row operating and characteristic values reviewed.	

KF4 is listed in the supplied valve table as a HF pentode. Published operating and characteristic values were transcribed from its target row.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1938 Philips Miniwatt Vacuum Tube Catalog

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1938 PHILIPS MINIWATT VACUUM TUBE CATALOG

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	135 V	Published table operating point
Screen voltage	135 V	Published table operating point
Plate current	2.6 mA	Published table operating point
Control-grid bias	0.1 V	Published table operating point
Alternate plate voltage	90 V	OperatingPoint2
Alternate screen voltage	90 V	OperatingPoint2
Alternate plate current	1.2 mA	OperatingPoint2
Alternate control-grid bias	0.15 V	OperatingPoint2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1000000 ohm	Published table characteristic
Transconductance	800 μ S	Published table characteristic
Heater/filament voltage	2 V	Published heater/filament rating
Heater/filament current	65 mA	Published heater/filament rating
Alternate transconductance	900 μ S	OperatingPoint2

1999 Philips E-Z

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1999 PHILIPS E-Z
Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage. Vi	20 V	ClassB
Filament current. Iy	65 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Va = max	135 V	—
Wa = max	0.5 W	—
Vya = max	135 V	—
I ¢ Wy = max	0.25 W	—
Iy Iy, = max	5 mA	—
Anode voltage [1]	90 V	—
Anode voltage [2]	135 V	—
Sereen-grid voltage [1]	90 V	—
Sereen-grid voltage [2]	135 V	—
Grid bias. – [1]	0.5 V	—
Grid bias. – [2]	5 V	—
Anode current [1]	1.2 mA	—
Anode current [2]	2.6 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen-grid current [1]	4 mA	—
Screen-grid current [2]	1 mA	—
Mutual conductance [1]	0.7 mA/V	—
Mutual conductance [2]	0.8 mA/V	—
leak of following valve	1 MΩ	PentodeConnection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
1) Max. excitation of the stage KC 8 + KDD 1 at Va	185 V	—
of	2.2 V	—
) Max. excitation of the stage KC 3 + KDD 1 at Va	90 V	—
135 20,000 2.6 0.5 19 [22Y] 1.1 2 08 1.5 0.9	1.4 V	—
KF 4 used as A.F. amplifier (connected as pentode). Grid leak of following valve	1 MΩ	PentodeConnection
KT 4 used as A.F amplifier (connected as triode). Grid leak of the following valve	1 MΩ	TriodeConnection
1)_Max. excitation of the KL 2 at Va = Vg	90 V	—
Max. excitation of the KL 4 at Vg Vg	90 V	—
?) Max. excitation of the KI. 2 at Va Vgs	135 V	—
Max. excitation of the KL 4 at Va = Vg	135 V	—
- gt=0 o	5 V	—
Py with grid bias as parameter, at Vg	0 V	—
Saiviiass	135 V	—
Ml Va-vq2<	135 V	—
f Vanvg2	90 V	—
08g\.\$~ meela o [1]	53 A	—
08g\.\$~ meela o [2]	135 V	—
o I~ "Va:Vg2	90 V	—

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